



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0428; Directorate Identifier 2011-NM-078-AD]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Airbus Model A330-243, -243F, -342, and -343 airplanes. This proposed AD was prompted by reports of cracking of air intake cowls on Rolls-Royce Trent engines, worn and detached attachment links, and fractured thermal anti-ice (TAI) piccolo tubes. This proposed AD would require inspecting piccolo tubes, piccolo tube mount links, the aft side of the forward bulkhead, and outer boundary angles (OBA) for cracks, fractures, and broken links, and corrective actions if necessary. We are proposing this AD to prevent degraded structural integrity of the engine nose cowl and a broken piccolo tube, which could lead to in-flight damage of the engine and reduced thermal anti-ice performance.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Airbus service information identified in this proposed AD, contact Airbus SAS – Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; e-mail airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>. For Rolls-Royce service information identified in this proposed AD, contact Rolls-Royce Plc, Technical Publications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 44 (0) 1332 245882; fax 44 (0) 1332 249936; Internet <http://www.Rolls-Royce.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the

regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0428; Directorate Identifier 2011-NM-078-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for

the Member States of the European Community, has issued EASA Airworthiness Directive 2011-0062, dated April 4, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

During shop visit, several primary assembly structures of A330 aeroplanes Trent 700 [engine] air intake cowl have been found with cracks in the forward bulkhead web, web stiffeners and outer boundary angles. Several attachment links have been found severely worn, and some had become detached. In 2 cases, the Thermal Anti Ice (TAI) Piccolo tube was found fractured. Investigations are still ongoing to determine the root cause(s).

If not detected and corrected, a broken Piccolo tube in conjunction with forward bulkhead damage could ultimately lead to in flight detachment of the outer barrel, which would constitute an unsafe condition.

For the reasons described above, this [EASA] AD requires to perform inspections of RR [Rolls-Royce] Trent 700 [engine] nose cowls and, depending on findings, to do the applicable corrective action(s). These inspections include internal inspection of Piccolo tube, detailed inspection of Piccolo tube mount links, [boroscope] inspection of aft side of forward bulkhead and outer boundary angle [for cracks, fractures and broken links].

The degraded structural integrity of the engine nose cowl and a broken piccolo tube could lead to in-flight damage of the engine and reduced thermal anti-ice performance. The corrective action is specified as replacing the affected engine air intake cowl with a new or serviceable cowl. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Airbus has issued Mandatory Service Bulletin A330-71-3025, including Appendices 01 and 02, dated January 10, 2011. Rolls-Royce has issued Service Bulletin

RB.211-71-AG416, including Appendix 1, dated September 3, 2010. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI. The interval for repetitive inspections of the OBA is between 450 flight cycles and 5,000 flight cycles depending on crack length; and the interval for the repetitive inspections of the forward bulkhead is between 400 flight cycles and 5,000 flight cycles depending on crack length.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This AD and the MCAI or Service Information

Figure A-FBBAA - Sheet 03 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, specifies certain actions based on inspection findings of OBA cracking greater than 22 inches or bulkhead cracking greater than 13 inches. This proposed AD specifies the actions to be done for OBA cracking of 22 inches or greater and bulkhead cracking of 13 inches or greater.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect

about 14 products of U.S. registry. We also estimate that it would take about 10 work-hours per engine to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$11,900 per engine, or \$850 per engine.

In addition, we estimate that any necessary follow-on actions would take about 16 work-hours per engine for a cost of \$1,360 per engine. We have received no definitive data that would enable us to provide material cost estimates for the on-condition actions specified in this proposed AD. We have no way of determining the number of products that may need these actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Airbus: Docket No. FAA-2012-0428; Directorate Identifier 2011-NM-078-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Model A330-243, -243F, -341, -342, and -343 airplanes, certificated in any category, all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 71; Engine.

(e) Reason

This AD was prompted by reports of cracking of air intake cowls on Rolls-Royce Trent engines, worn and detached attachment links, and fractured thermal anti-ice (TAI) piccolo tubes. We are issuing this AD to prevent degraded structural integrity of the engine nose cowl and a broken piccolo tube, which could lead to in-flight damage of the engine and reduced thermal anti-ice performance.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Piccolo Tube Inspection

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD, do a boroscope inspection of each air intake cowl assembly of each engine to detect cracked or fractured piccolo tubes, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011. If any cracked or fractured piccolo tube is found: Before further flight, replace the affected engine air intake cowl with a new or serviceable cowl, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011.

(1) For any air intake cowl that has accumulated fewer than 5,000 flight cycles since its first installation on an airplane as of the effective date of this AD: Inspect within 24 months after the air intake cowl has accumulated 5,000 total flight cycles.

(2) For any air intake cowl that has accumulated 5,000 or more flight cycles since its first installation on an airplane as of the effective date of this AD: Inspect within 24 months after the effective date of this AD.

(h) Piccolo Link Inspection

If the inspection findings of paragraph (g) of this AD indicate no cracked or fractured piccolo tube: Before further flight, do a boroscope inspection of the piccolo

tube links to detect broken links, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011. If no broken links are found: Before further flight, do the actions required by paragraph (i) of this AD.

(1) If 4 or more broken piccolo tube links are found: Before further flight, replace the affected engine air intake cowl with a new or serviceable cowl, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011.

(2) If 3 or fewer broken piccolo tube links are found and the opposite intake cowl of the same engine has accumulated 5,000 flight cycles or less since the cowl was first installed on an airplane: Before further flight, do the actions in Figure A-FBBAA-Sheet 03 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, as required by paragraph (i) of this AD.

(3) If 3 or fewer broken piccolo tube links are found and the opposite intake cowl of the same engine has accumulated more than 5,000 total flight cycles since the cowl was first installed on an airplane: Before further flight, do a boroscope inspection of the piccolo tube links of the opposite intake cowl side to detect broken links, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011.

(i) If the inspection findings of the piccolo tube links of the opposite intake cowl side indicate no broken piccolo tube links: Before further flight, do the actions required

by paragraph (i) of this AD, “Repetitive Outer Boundary Angle and Forward Bulkhead Inspection.”

(ii) If the inspection findings of the piccolo tube links of the opposite intake cowl side indicate 1 or more broken piccolo tube links: Before further flight, do the actions specified in Note 01 of Figure A-FBBAA – Sheet 02 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, at the time specified in Note 01 of Figure A-FBBAA – Sheet 02 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, except for the instructions to “See Sheet 03”. Where Note 01 of Figure A-FBBAA – Sheet 02 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, specifies to “See Sheet 03” to do a detailed inspection of the outer boundary angle (OBA) and bulkhead as specified in Rolls-Royce Service Bulletin RB211-71-AG416, excluding Appendix 1, dated September 3, 2010: This AD requires the detailed inspection specified in Figure A-FBBAA – Sheet 03 Flow Chart of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011, to be done in accordance with paragraph (i) of this AD.

(i) Repetitive Outer Boundary Angle and Forward Bulkhead Inspection

If the results of the inspection required by paragraph (h) of this AD indicate no broken piccolo tube links, or if the requirements in paragraph (h)(2) or (h)(3)(ii) of this AD specify to do the actions in Figure A-FBBAA - Sheet 03 Flow Chart of Airbus

Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011: Before further flight, do a boroscope inspection of the OBA and forward bulkhead to detect cracks or fractures, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011; and the Accomplishment Instructions of Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010.

(1) If the findings of the inspection are within the allowable damage limit, as specified in the Accomplishment Instructions of Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010: Do the actions in paragraphs (i)(1)(i) and (i)(1)(ii) of this AD.

(i) Repeat the inspection of the OBA and forward bulkhead thereafter at the repeat interval specified in Part 3.B. of the Accomplishment Instructions of Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010.

(ii) Repeat the inspections specified in paragraphs (g) and (h) of this AD thereafter at intervals not to exceed 2,500 flight cycles.

(2) If the findings of the inspection are not within the allowable damage limit, as specified in the Accomplishment Instructions of Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010: Do the actions in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD.

(i) If any OBA crack is 22 inches or greater, or any forward bulkhead crack is 13 inches or greater: Before further flight, replace the affected engine air intake cowl with a

new or serviceable cowl, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 2, dated January 10, 2011.

(ii) If any OBA crack is 15 inches or greater, but less than 22 inches, or any forward bulkhead crack is 9 inches or greater, but less than 13 inches: Within 100 flight cycles, replace the affected engine air intake cowl with a new or serviceable cowl, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011.

(j) Repetitive Inspections for Replaced Engine Air Intake Cowl

If any engine air intake cowl is replaced in accordance with the requirements of this AD with a cowl that has less than 5,000 flight cycles since the cowl was first installed on an airplane: Repeat the inspection required by paragraph (g) of this AD thereafter at the compliance time specified in paragraph (g)(1) of this AD.

(1) If any engine air intake cowl is replaced in accordance with the requirements of this AD with a cowl with 5,000 flight cycles or more since the cowl was first installed on an airplane: Repeat the inspections required by paragraphs (g) and (h) of this AD thereafter at intervals not to exceed 2,500 flight cycles.

(2) If any engine air intake cowl is replaced in accordance with the requirements of this AD with a cowl with 5,000 flight cycles or more since the cowl was first installed on an airplane: Repeat the inspections required by paragraph (i) of this AD thereafter at the intervals specified in the Accomplishment Instructions of Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. Information may be e-mailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(l) Related Information

Refer to MCAI European Aviation Safety Agency Airworthiness Directive

2011-0062, dated April 4, 2011; Airbus Mandatory Service Bulletin A330-71-3025, including Appendix 01, excluding Appendix 02, dated January 10, 2011; and Rolls-Royce Service Bulletin RB.211-71-AG416, excluding Appendix 1, dated September 3, 2010; for related information.

Issued in Renton, Washington, on April 29, 2012.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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